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FILE 'MEDLINE' ENTERED AT 15:39:46 ON 18 JUL 2006

=> s vancomycin and ((paste) or (cement)) and ratio

L1 10 VANCOMYCIN AND ((PASTE) OR (CEMENT)) AND RATIO

=> dup remo l1

PROCESSING COMPLETED FOR L1

L2 7 DUP REMO L1 (3 DUPLICATES REMOVED)

=> d l2 1-7 bib abs

L2 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2006:577765 CAPLUS

DN 145:34291

TI Sustained-release compositions comprising, for example, anti-infective agents and methods for treating conditions of the nail unit

IN Kochinke, Frank; Bright, Corinne

PA Talima Therapeutics, Inc., USA

SO PCT Int. Appl., 32 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---|------|----------|-----------------|----------|
| PI | WO 2006063350 | A2 | 20060615 | WO 2005-US44930 | 20051212 |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| | RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| | US 2006153786 | A1 | 20060713 | US 2005-302014 | 20051212 |
| PRAI | US 2004-593106P | P | 20041210 | | |

AB The biodegradable drug delivery systems described here are formulated for implantation into the nail unit and its surrounding tissues for the treatment of various nail unit conditions. The systems include greater than 30% by weight of the active agent, e.g., an anti-infective agent, for local sustained release, and may be formulated as solns., solids,

semisolids, microparticles, or crystals. Thus, terbinafine extruded delivery system was made by first mixing terbinafine HCl and PEG at a ratio of 70:30, resp., heating the mixture for 1 h at 115° and extruding the melt through a circular orifice to create a filament having a diameter of about 0.4 mm. From the filament, various length subunits were cut and tested for in vitro drug release. Terbinafine release from a 3.0 mm long filament was 1% (day 1), 3% (day 2), 5%, (day 14), and 15% (day 30).

L2 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 1
AN 2004:1086999 CAPLUS
DN 142:487340
TI An articulated antibiotic spacer used for infected total knee arthroplasty: a comparative in vitro elution study of Simplex and Palacos bone cements
AU Stevens, C. Melinda; Tetsworth, Kevin D.; Calhoun, Jason H.; Mader, Jon T.
CS Department of Orthopaedics and Rehabilitation, Division of Infectious Diseases, The University of Texas Medical Branch, Galveston, TX, 77555-0165, USA
SO Journal of Orthopaedic Research (2005), 23(1), 27-33
CODEN: JOREDR; ISSN: 0736-0266
PB Elsevier B.V.
DT Journal
LA English
AB For the staged management of infected total knee arthroplasty (TKA), antibiotic laden polymethylmethacrylate (PMMA) spacers were recommended. Antibiotic-impregnated PMMA spacers target drug delivery, achieving high local levels while limiting the potential for host toxicity associated with parenteral antimicrobial therapy. This study examined the elution characteristics of an articulating PMMA TKA spacer that was useful clin. Tobramycin and vancomycin are both active against many organisms leading to joint infections. The authors used various combined antibiotic concns. (maintaining a relative ratio of 55% tobramycin to 45% vancomycin weight/weight), and then assayed the elution profile of the TKA spacer in vitro. Addnl., the elution qualities of 2 brands of bone cement, Simplex and Palacos were compared. Briefly, 3 groups of PMMA spacers, impregnated with different antibiotic loads, were fashioned from a mold replicating a femoral TKA component. The entire spacer surface area was immersed in sterile phosphate buffered saline (PBS) in a 1:6 ratio of grams of cement to milliliters of PBS and incubated at 37 °C for 24 h. After 24 h, aliquot eluates were taken, the PBS discarded, and replaced with fresh, sterile PBS. PBS was changed daily and an aliquot was taken at least weekly for 9 wk. Eluate samples were stored at -70 °C until assayed. Each spacer eluate sample's antibiotic concentration was determined by disk diffusion bioassay against *Bacillus subtilis*. Mean zone inhibition diams. were extrapolated from the standard curve to yield micrograms per mL of antibiotic in PBS. In all groups the Palacos spacers demonstrated higher elution levels, above the MIC for the organism used, for a longer period of time than those made with Simplex. Based on the observed elution profiles, antibiotic-impregnated Palacos bone cement may offer a more effective vehicle for local drug delivery during staged treatment of infected TKA.
RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 3 OF 7 SCISEARCH COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 2004:360288 SCISEARCH
GA The Genuine Article (R) Number: 809NS
TI Addition of fusidic acid impregnated bone cement to systemic teicoplanin therapy in the treatment of rat osteomyelitis
AU Ersoz G (Reprint); Oztuna V; Coskun B; Eskandari M M; Bayarslan C; Kaya A
CS Mersin Univ, Tip Fak, Klin Bakteriyoloji Infeksiyon Hastalıkları AD,

TR-33079 Mersin, Turkey (Reprint); Mersin Univ, Sch Med, Dept Clin Microbiol & Infect Dis, Mersin, Turkey; Mersin Univ, Sch Med, Dept Orthoped Surg, Mersin, Turkey; Mersin Univ, Sch Med, Dept Histol & Embryol, Mersin, Turkey

CYA Turkey

SO JOURNAL OF CHEMOTHERAPY, (FEB 2004) Vol. 16, No. 1, pp. 51-55.
ISSN: 1120-009X.

PB E I F T SRL, VIA XX SETTEMBRE 102, 50129 FLORENCE, ITALY.

DT Article; Journal

LA English

REC Reference Count: 25

ED Entered STN: 30 Apr 2004

Last Updated on STN: 30 Apr 2004

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB We compared the efficacy of the combination of fusidic acid impregnated bone cement and systemic teicoplanin to systemic teicoplanin alone in implant-related osteomyelitis model in the rats. Foreign bodies were implanted into the medullary channels of 30 rat tibias after intramedullary inoculation of methicillin-resistant *Staphylococcus aureus*. Following proof of induction of osteomyelitis in the rats on the 21(st) day, a bone cement rod including 1/40 ratio of fusidic acid was inserted into the medullary channel of the tibias in the study group. Teicoplanin was administered i.m. at 20 mg/kg/day for 14 days to both the study and control groups. At the end of the treatment, the tibias were examined macroscopically, microbiologically and histopathologically. The elimination rate with the teicoplanin+fusidic acid combination was 81.8%, while with teicoplanin alone was 55.6% (p = 0.33). Although the difference between the two groups was not statistically significant, the combination treatment had a positive effect in eliminating the microorganism.

L2 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:1264057 CAPLUS

DN 144:11728

TI Drug release-controlling calcium phosphate bone cement and its clinical application

IN Liu, Changsheng; Huang, Yue; Chen, Fangping

PA East China University of Science and Technology, Peop. Rep. China

SO Faming Zhanli Shenqing Gongkai Shuomingshu, 17 pp.

CODEN: CNXXEV

DT Patent

LA Chinese

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| PI | CN 1446589 | A | 20031008 | CN 2003-114872 | 20030113 |
| PRAI | CN 2003-114872 | | 20030113 | | |

AB The title bone cement (artificial bone) is composed of porous calcium phosphate bone cement and drug microcapsule at weight ratio of. The porous calcium phosphate bone cement contains calcium phosphate bone cement powder and pore-forming agent, the calcium phosphate bone cement powder is one or mixture of alpha tricalcium phosphate, beta tricalcium phosphate and tetracalcium phosphate or of octacalcium phosphate, $Ca(H_2PO_4)_2$, hydroxyapatite and fluorapatite, the pore-forming agent is innoxious slightly soluble salt, acidic salt and basic salt, soluble innoxious organic substance or innoxious surfactant. The drug microcapsule contains cyst wall material and drug as capsule core at ratio of 1:1-1:20, the capsule core (drug) is selected from antimicrobial, antineoplastic, Antipyric and anodyne, antituberculotic (rifampicin), the wall material contains soluble starch, hydroxypropyl cellulose, ethylcellulose, gelatin or chitosan. The antimicrobial is tobramycin, vancomycin, tienam, rocephin, pipemidic acid, cephalosporins or metronidazole etc., the antineoplastic is amethopterin, adriamycin, fluorouracil, flutamide or lomustine, the

antipyrotic and anodyne is sodium naproxen or indomethacin. The title bone cement is prepared by mixing coat material with cyst core at ratio of 1:1-20, solvent vaporizing to obtain 100-400 μm microcapsule, mixing with 5-20 μm of porous calcium phosphate cement powder at ratio of 0.5-20:100, embedding. The title calcium phosphate bone cement can be transplanted in body for use for bone repairing after mixing with physiol. salt solution or 7-25wt% phosphate aqua solution

L2 ANSWER 5 OF 7 SCISEARCH COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 2002:458925 SCISEARCH
GA The Genuine Article (R) Number: 556GA
TI Self-curing acrylic formulations containing PMMA/PCL composites: Properties and antibiotic release behavior
AU Mendez J A; Abraham G A; Fernandez M D; Vazquez B; Roman J S (Reprint)
CS CSIC, Inst Ciencia & Tecnol Polimeros, Juan Cierva 3, Madrid, Spain (Reprint); CSIC, Inst Ciencia & Tecnol Polimeros, Madrid, Spain
CYA Spain
SO JOURNAL OF BIOMEDICAL MATERIALS RESEARCH, (JUL 2002) Vol. 61, No. 1, pp. 66-74.
ISSN: 0021-9304.
PB JOHN WILEY & SONS INC, 111 RIVER ST, HOBOKEN, NJ 07030 USA.
DT Article; Journal
LA English
REC Reference Count: 42
ED Entered STN: 14 Jun 2002
Last Updated on STN: 14 Jun 2002
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
AB Partially biodegradable acrylic composites containing poly(methyl methacrylate)-poly(epsilon-caprolactone) (PMMA/PCL) systems were prepared by mixing the corresponding PMMA/PCL beads (89:11, 86:14, 83:17, and 77:23 weight ratio) used as solid phase with methyl methacrylate (MMA) (liquid phase) in a solid/liquid ratio of 1.5:1. The physical and chemical microheterogeneity of these beads influenced significantly the curing parameters, because several aspects involved in the polymerization reaction are closely related to both morphology and size distribution of the particles. In vitro behavior was studied by immersion in simulated body fluid at pH = 7.4 and 37degreesC for more than 8 weeks and the composition was followed by H-1-nuclear magnetic resonance spectroscopy. Approximately 2% wt/wt weight loss was observed after a period of 8 weeks for the composites richest in PCL. Mechanical properties of the dry and wet specimens were evaluated by compressive and tensile tests. In all cases, the presence of PCL in the composites provided a significant decrease in both compressive strength and elastic modulus compared with plain PMMA. Tensile and compressive strength also decreased significantly after 2 weeks of immersion in simulated body fluid compared with dry specimens. The self-curing composites based on PMMA/PCL beads and loaded with 3% wt/wt vancomycin were evaluated as carriers for local release of antibiotics. The composite prepared with beads of PMMA/PCL ratio 86:14 was the most effective. It eluted 64% of the initial drug within the first 5 h, allowing progressive release of nearly the total amount of the initial drug (90%) in approximately 2 months. The results obtained suggest that the described composites can be suitable for antibiotic release in non-load bearing graft applications.
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L2 ANSWER 6 OF 7 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 2002:176250 BIOSIS
DN PREV200200176250
TI Elution study of an antibiotic impregnated polymethylmethacrylate total knee arthroplasty spacer: A comparative study of Simplex(R) and Palacos(R) brand bone cements.
AU Stevens, C. M. [Reprint author]; Chapa, E. J.; Sutherland, N. R.; Mader,

J. T. [Reprint author]
 CS University of Texas Medical Branch, Galveston, TX, USA
 SO Abstracts of the General Meeting of the American Society for Microbiology, (2001) Vol. 101, pp. 34-35. print.
 Meeting Info.: 101st General Meeting of the American Society for Microbiology. Orlando, FL, USA. May 20-24, 2001. American Society for Microbiology.
 ISSN: 1060-2011.
 DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 LA English
 ED Entered STN: 6 Mar 2002
 Last Updated on STN: 6 Mar 2002
 AB In total knee arthroplasty (TKA), polymethylmethacrylate (PMMA) spacers have been used to replace the removed prosthesis. To prevent infections associated with this procedure (1-3%) or treat infections necessitating TKA, spacers are antibiotic impregnated, to decrease host toxicity seen with parenteral antimicrobial therapy. This study examined the elution characteristics of a TKA spacer designed by Tetsworth et al. Tobramycin and Vancomycin are active against most organisms leading to joint infections and osteomyelitis. We used various combined antibiotic concentrations, respective ratio of 55% Tobramycin:45% Vancomycin w/w, to measure the spacer elution profile. Additionally, the elution qualities of two brands of bone cement, Simplex(R) and Palacos(R), were resolved. Briefly, three groups of spacers, each group with different antibiotic levels, were fashioned from the Tetsworth mould and allowed to polymerize. The spacers were immersed in sterile phosphate buffered saline (PBS) in a 1:6 ratio of grams of implant to milliliters of PBS and incubated at 37degreeC. The PBS was discarded and replaced with fresh, sterile PBS daily and an aliquot was taken at least weekly for nine weeks. Eluate samples were stored at -70degreeC until assayed. Antibiotic concentration in each sample was determined by disc diffusion bioassay against *Bacillus subtilis*. Mean inhibitory zone diameters were extrapolated from the standard curve to yield micrograms per milliliter of antibiotic in PBS. Palacos(R) spacers yielded elutions above the MIC for the organism used for a longer period of time than those made with Simplex(R). At lower concentrations, however, Simplex(R) spacers eluted a higher ratio of antibiotic above the MIC. For the length of treatment needed, the use of antibiotic impregnated Palacos(R) bone cement may offer an efficacious method for prophylaxis or treatment of TKA infections.

L2 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1999:249066 CAPLUS
 DN 130:287100
 TI Hydraulic surgical cements comprising calcium phosphate
 IN Lemaitre, Jaques; Bohner, Marc; Van Landuyt, Pascale
 PA H. C. Robert Mathys Stiftung, Switz.; Stratec Medical A.-G.
 SO PCT.Int. Appl., 26 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|--|------|----------|-----------------|----------|
| PI | WO 9917710 | A1 | 19990415 | WO 1998-EP6330 | 19981006 |
| | W: CA, JP, US | | | | |
| | RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| | CA 2306562 | AA | 19990415 | CA 1998-2306562 | 19981006 |
| | EP 1023032 | A1 | 20000802 | EP 1998-954344 | 19981006 |
| | EP 1023032 | B1 | 20020102 | | |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| | JP 2001518359 | T2 | 20011016 | JP 2000-514603 | 19981006 |

| | | | | |
|---------------------|----|----------|----------------|----------|
| AT 211379 | E | 20020115 | AT 1998-954344 | 19981006 |
| PT 1023032 | T | 20020628 | PT 1998-954344 | 19981006 |
| ES 2170533 | T3 | 20020801 | ES 1998-954344 | 19981006 |
| US 6425949 | B1 | 20020730 | US 2000-529054 | 20000707 |
| PRAI WO 1997-EP5495 | A | 19971007 | | |
| EP 1998-954344 | A | 19981006 | | |
| WO 1998-EP6330 | W | 19981006 | | |

AB The cement for surgical purposes comprises three components. The first component comprises β -Ca₃(PO₄)₂ (β -TCP) particles; and Ca(H₂PO₄)₂ (MCPA) or Ca(H₂PO₄)₂·H₂O (MCPM) particles or phosphoric acid. The second component comprises water. The third component comprises particles having an average diameter which is larger than the average diameter of the β -TCP particles of the first component. Upon mixing of the three components a hardened mass comprising brushite CaHPO₄·2H₂O (DCPD) is formed. The β -TCP particles have a sp. surface area of less than 10,000 m²/g and a Ca/P atomic ratio different from 1.50. The component constitutes 1-99 % of the hardened mass. The cements according to the invention may be used in dental and maxillofacial surgery (alveolar ridge reconstruction, dental socket filling), for orthopedic applications (bone fracture repair, bone augmentation) and for local drug delivery (antibiotics, anti-inflammatory and anti-cancer drugs).

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT